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SUBJECT: TURKEY'S BORON IS NOT BORING

**¶1.** SUMMARY: As the holder of the world's largest Boron reserves, Turkey is eager to derive economic value from this mineral. Among a variety of applications in industry, use of Boron for fuel cells and the potential hydrogen economy is most promising. Turkey's relatively new Boron Institute aims to foster research and development in new applications. End Summary.

**¶2.** In a meeting May 3 with Embassy Officer, National Boron Research Institute President Erk Inger and Board Member Funda Altun made the following points:

-Turkey holds the world's largest Boron reserves (563 million tons or 64 % of the world's known reserves), compared to Russia (100 million tons) and the U.S. (80 million tons). The U.S. is the biggest producer and consumer of boron. 92 % of Turkey's production is exported to the U.S.

-Boron is used in agriculture, timber preservation, civil works, textiles, paper, ceramics, glass, chemicals, medicine, metallurgy, cleaning products and more. The Boron Institute enthusiastically notes over 250 uses of boron. In the energy sector, boron can be used for energy storage, fuels, and insulation. There are specialized potential application in nuclear power plants and magnetic levitation transportation. The greatest enthusiasm is reserved for use of sodium borohydrate (and potentially other boron-based chemicals) for fuel cells to help "catalyze" the next energy frontier--the prospective hydrogen economy.

-Turkey's National Boron Research Institute was established in 2004 and is dedicated to the goals of supporting R&D activities to develop new technologies and applications for use of boron products and seeking to increase the consumption of boron products in Turkey and the world. In collaboration with the Turkish Atomic Energy Agency, the Ministry of Natural Resources and Energy (MENR), and Eti Mining (the state boron mining company), the Boron Institute held the first National Workshop on boron April 28-29. The workshop aimed to facilitate cooperation on research and policies to speed up deriving economic value from boron mineral resources (by both increasing consumption and carrying out higher value production in Turkey). MENR Minister Guler said, "we have much more to do with boron. Our objective is to use our underground resources for the economy."

**¶3.** Comment: Although not rich in hydrocarbons, Turkey is rich in some minerals, particularly boron. A current Turkish best-seller "Metal Storm" depicts the anti-American fantasy of the seizure of Turkey's boron reserves by the U.S. military. Stressing that U.S. interest was not of this nature, Embassy Officer and Turkish Boron Institute officials discussed possibilities for commercial and research cooperation on boron applications. Istanbul will host the International Hydrogen Energy Congress and Exhibition July 13-15, which will be an opportunity to highlight boron's potential role. Turkey's International Center of Hydrogen Energy Technologies and Boron Institute will be show-cased. (Note: Turkish press reports indicate that California Governor Arnold Schwarzenegger will attend the July hydrogen conference.)

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